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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,485	09/15/2003	Joachim Laurenz Naimer	56946-022800	9212

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EXAMINER	
TWEEL JR, JOHN ALEXANDER	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/662,485	NAIMER ET AL.	
	Examiner	Art Unit	
	John A. Tweel, Jr.	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 7-18, 22-29, 33-37, and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gordon** in view of **Staggs et al** [U.S. 6,683,541] (supplied by applicant).

For claim 1, the electronic display for presenting airspeed data of an aircraft taught by **Gordon** includes the following claimed subject matter, as noted, 1) the claimed electronic airspeed tape is met by the airspeed indicator (No. 28) having a scrolling linear scale seen in Figures 2 and 11, wherein the hidden numbers 1 and 9 help to emulate the view of a mechanical drum gauge, and scrolling of the airspeed tape maintains the scale on the display. However, the scale in the airspeed tape is linear as opposed to non-linear.

Non-linear scales have been used in aircraft displays for some time. The vertical speed indicator taught by **Staggs** includes a non-linear scale as seen in Figures 4-6C. This reference is plain evidence that non-linear scales have been used to display advanced navigation information at the time of the Gordon reference. It would have

been obvious to one of ordinary skill in the art at the time the invention was made to include a non-linear scale for the purpose of utilizing a well-known display method.

For claim 2, the airspeed data is centered on the nonlinear scale of the display.

For claim 3, the **Gordon** reference includes the claimed subject matter as mentioned above; however, there is no mention of display the data in units of knots.

Knots are commonly used to display airspeed data and have been for some time. As this obvious display technique has been used and is very well known in the prior art, it is not considered a patentable innovation as the inclusion of which would not result in a new or unexpected result.

For claim 4, the range of airspeed in knots is a decision best left to the user or designer of the display system to maximize the noticeability of the display.

For claim 5, the windows seen in Figures 2 and 11 show the current airspeed of the aircraft.

For claim 7, the data displayed in the window is an enlarged display of the airspeed tape.

For claim 8, the color of the background is not considered a patentable innovation as many different colors may be selected for maximum effectiveness of the display system.

For claims 9-14, every single airspeed indicator used includes upper and lower limits. The decision to change said limits is not a patentable innovation as customizing these limits do not result in a new or unexpected result in the display or operation of the aircraft.

For claim 15, the electronic display for presenting altitude data of an aircraft taught by **Gordon** includes the following claimed subject matter, as noted, 1) the claimed electronic altitude tape is met by the altitude display area (No. 30) having a scrolling altitude indicator (No. 32), wherein the numbers 20 and 80 help to emulate the view of a mechanical drum gauge, and wherein a scroll of the altitude tape maintains the altitude indicator on the display. However, the altitude tape is not non-linear.

The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 1 above.

For claim 16, the altitude data of the aircraft seen in **Gordon** is centered on the tape display.

For claim 17, the altitude shown in Figure 4 is in units of feet.

For claim 18, the range of the display of Figure 4 depicts 1200 feet.

For claim 22, the windows seen in Figures 3 and 7 show the current altitude of the aircraft.

For claim 23, the data displayed in the windows is an enlarged display of the airspeed tape.

For claim 24, the window of **Gordon** displays the numeric altitude of the aircraft.

For claim 25, the display of **Gordon** is an electronic emulation of the mechanical rolling numeric display (Col. 1, Lns. 26-31).

For claim 26, the color of the background is not considered a patentable innovation as many different colors may be selected for maximum effectiveness of the display system.

For claim 27, the electronic display for presenting heading data of an aircraft taught by **Gordon** includes the following claimed subject matter, as noted, 1) the claimed electronic heading tape is met by the scrolling heading indicator (No. 24) wherein the nonlinear scale seen centered in Figure 2 emulates the view of a mechanical drum gauge, and wherein a scroll of the electronic heading tape maintains the nonlinear scale on the display. However, the heading tape is not non-linear.

The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 1 above.

For claim 28, Figure 2 and 11 of **Gordon** depict the letter N at the 360-degree heading.

For claim 29, Figures 2 and 11 depict a window showing the current heading of the aircraft.

For claim 33, the heading window seen in Figure 2 is an enlarged portion of the heading data seen on the tape.

For claim 34, the electronic display of **Gordon** is comprised of a numeric display of the current heading of the aircraft.

For claim 35, the color of the background is not considered a patentable innovation as many different colors may be selected for maximum effectiveness of the display system.

For claim 36, the electronic display for presenting data of an aircraft taught by **Gordon** includes several scrolling electronic tapes as seen in Figures 2 and 11, wherein

a scroll of the tape maintains the scale on the display. However, the scale of the tape is not non-linear that emulates a drum gauge.

The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 1 above.

For claim 37, the display of **Gordon** comprises several windows showing the current data of the aircraft.

For claim 39, the windows comprise a display of the current data of the aircraft.

For claim 40, the color of the background is not considered a patentable innovation as many different colors may be selected for maximum effectiveness of the display system.

For claim 41, the electronic display presenting data of an aircraft taught by **Gordon** presents several instances of scrolling electronic tapes as seen in Figures 2 and 11 wherein current data is shown at a middle portion of the electronic tape. However, there is no non-linear decrease of the distance between tick marks as the distance from the middle portion increases emulating a mechanical drum gauge.

The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 1 above.

For claim 42, one view found in Gordon is a heading indicator (No. 24).

For claim 43, one view found in Gordon is an altitude indicator (No. 32).

3. Claims 6, 32, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gordon et al** in view of **Staggs et al** as applied to claims 1, 27, and 36 above, and further in view of **Konicke et al**.

For claim 6, the display taught by **Gordon** includes the claimed subject matter as discussed in the rejection of claims 1 and 5 above. However, the airspeed window is not comprised in the shape of a pointer.

The integrated primary flight display taught by **Konicke** presents a display having similar subject matter as the primary reference, including centered data windows emulating the analog mechanical drum gauge as seen in Figure 1. Another property seen in the Figure is all display windows in the shape of pointers. This reference is plain evidence that pointers have been used for some time to enhance the display of flight information.

Both references pertain to very similar subject matter, in this case the presentation of flight data in a display. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the windows of Gordon as pointers for the purpose of using a well-known and common method of flight display presentation.

For claims 32 and 38, the claims are interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 6 above.

4. Claims 19-21, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gordon et al** in view of **Staggs et al** as applied to claims 15 and 27 above, and further in view of **Briffe et al**.

For claim 19, the reference taught by **Gordon** includes the claimed subject matter as mentioned in the rejection of claim 15 above. However, there is no mention of emulating a drum gauge in units of meters.

The apparatus and method for graphically oriented aircraft display and control taught by **Briffe** enables the crew to perform flight plan modification by manipulating graphical information on the display devices. One tool is the "M/FT" button (No. 82f) that displays information in meters as well as feet. This is plain evidence that meters have been used to display information in flight displays. An obvious advantage of this system is the ability to use the display in different countries where the metric system is used.

The Briffe reference is ample evidence that altitude in meters has been displayed to a flight crew for some time. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a display of altitude in meters for the purpose of enhancing the versatility of the display system.

For claim 20, the system taught by **Gordon** depicts a range of approximately 1200 feet. A change to meters introduced by Briffe enables a metric display of the same range.

For claim 21, the system of **Briffe** displays data in units of feet and in meters.

For claim 30, an additional button (No. 82c) found in **Briffe** enables the heading to be displayed as true heading and magnetic heading.

For claim 31, the heading display found in Figure 3 of **Briffe** depicts the word "TRU" near the heading signifying a true heading.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Tweel, Jr. whose telephone number is 571 272 2969. The examiner can normally be reached on M-F 10-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass can be reached on 571 272 2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAT
6/6/06

JOHN TWEEL
PRIMARY EXAMINER